

CLAIMS

1 1. A method of assembling a head gimbal assembly comprising the following
2 steps performed in the following order:

3 attaching a head/slider having at least one termination pad to a flex circuit
4 having at least one electrical lead to produce a head/slider circuited
5 gimbal assembly;
6 electrically connecting the at least one termination pad of the head/slider to
7 the at least one electrical lead of the flex circuit; and
8 attaching the head/slider circuited gimbal assembly to a suspension.

1 2. The method of claim 1 and further including:
2 determining the static angles of the head/slider circuited gimbal assembly
3 after the step of electrically connecting the at least one termination
4 pad of the head/slider to the at least one electrical lead of the flex
5 circuit.

1 3. The method of claim 2 and further including:
2 determining the static angles of the suspension prior to the step of attaching
3 the head/slider circuited gimbal assembly to the suspension.

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1 4. The method of claim 3 and further including performing a dynamic electrical
2 test on the head/slider circuited gimbal assembly prior to determining the static
3 suspension angles.

1 5. The method of claim 4 and further including determining the offset between
2 the head/slider circuited gimbal assembly prior to attaching it to the suspension.

1 6. The method of claim 5 wherein said offset is determined according to the
2 following formula:
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$$X = -(\Theta_{\text{Circuited Gimbal}} * k_{\text{Circuited Gimbal}} + \Theta_{\text{Suspension Flexure}} * k_{\text{Suspension Flexure}}) / F_{\text{Gram}} - X_0$$

5 where

6 $\Theta_{\text{Circuited Gimbal}}$ = static angle of the HSCG assembly;

7 $k_{\text{Circuited Gimbal}}$ = stiffness of the HSCG assembly;

8 $\Theta_{\text{Suspension Flexure}}$ = static angle of the suspension;

9 $k_{\text{Suspension Flexure}}$ = stiffness of the suspension;

10 F_{Gram} = Gram Load; and

11 X_0 = the product of the gram load and the load point shift.

1 7. The method of claim 1 and further including:
determining the static angles of the suspension prior to the step of attaching
the head/slider circuited gimbal assembly to the suspension.

1 8. The method of claim 1 and further including performing a dynamic electrical
2 test on the head/slider circuited gimbal assembly prior to determining the static
3 suspension angles.

1 9. The method of claim 8 wherein said dynamic electrical test is performed by
2 flying the head/slider circuited gimbal assembly over a rotating media disk.

1 10. The method of claim 1 and further including determining the offset between
the head/slider circuited gimbal assembly prior to attaching it to the suspension.

1 11. The method of claim 10 wherein said offset is determined according to the
2 following formula:

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$$X = -(\Theta_{\text{Circuited Gimbal}} * k_{\text{Circuited Gimbal}} + \Theta_{\text{Suspension Flexure}} * k_{\text{Suspension Flexure}}) / F_{\text{Gram}} - X_0$$

5 where

6 $\Theta_{\text{Circuited Gimbal}}$ = static angle of the HSCG assembly;

7 $k_{\text{Circuited Gimbal}}$ = stiffness of the HSCG assembly;

8 $\Theta_{\text{Suspension Flexure}}$ = static angle of the suspension;

9 $k_{\text{Suspension Flexure}}$ = stiffness of the suspension;

10 F_{Gram} = Gram Load; and

11 X_0 = the product of the gram load and the load point shift.